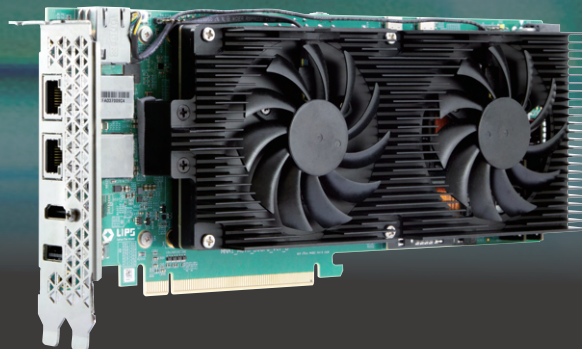


LIPSedge™ F110 3DxAI Edge Accelerator

Empowering next-generation 3D Vision and A.I.

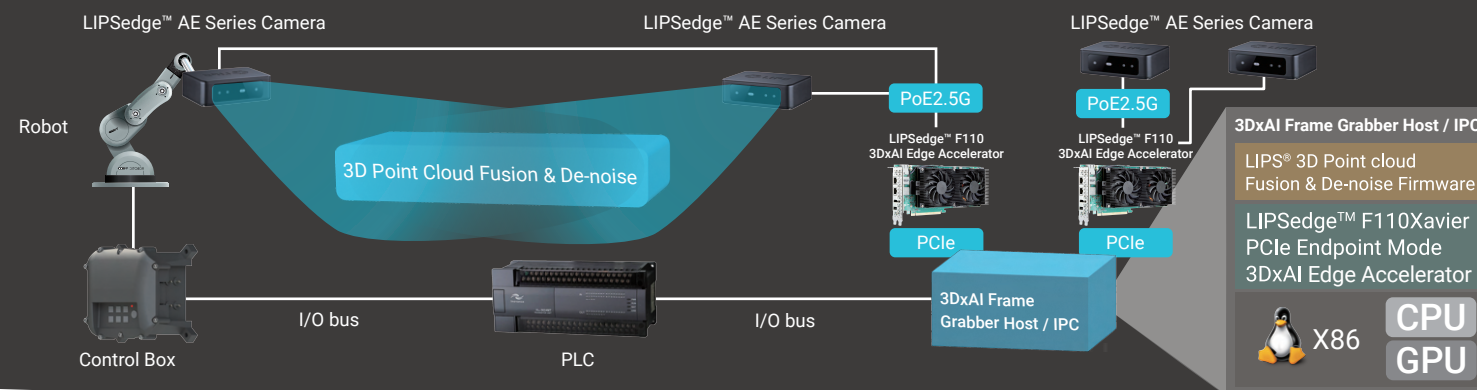


World's first **NVIDIA Jetson Xavier based PCIe PoE+ Endpoint-Mode Frame Grabber**

Best of Both Worlds on x86 and Nvidia Jetson

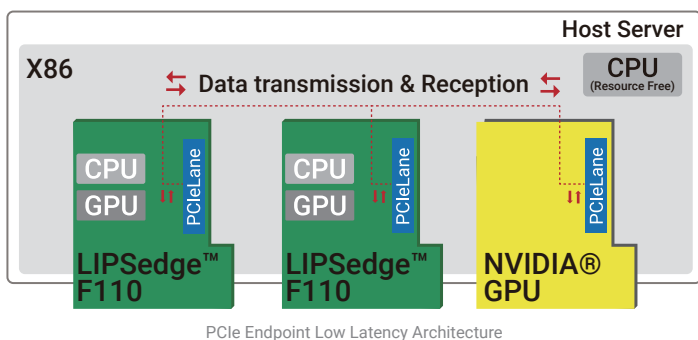
Run x86 applications such as ROS & ROS2 while taking advantage of the parallel computing & deep learning capabilities of NVIDIA Jetson

LIPS® Low Latency 3D Robotic Vision Solution



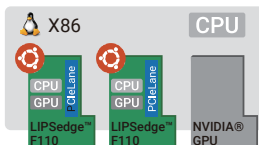
Main Features

■ PCIe Endpoint Mode



● Interconnect OS for Heterogeneous System Design

Enable heterogeneous OS communications between the host system (x86 based) and LIPSedge™ F110 (NVIDIA Jetson based)



■ Accelerate Point cloud 3D De-noise, Stitching & Fusion

LIPS® proprietary algorithm for 3D point-cloud noise-filtering and data redundancy elimination

- Passthrough Filter
 - Voxel Grid Filter
 - Radius Outlier Removal Filter
- LIPS® Algorithm Speed Efficiency <40 milliseconds

■ Root Port Deployment

- Switchable between Root and PCIe Endpoint Mode
- Develop applications with a full and extended SDK library from NVIDIA® Xavier support

Scale and Accelerate 3D Vision Applications

LIPSedge™ F110 3DxAI Edge Accelerator allows a single system to scale-up & pre-process multiple 3D camera streams while performing AI inference and keeping the CPU utilization low

● High Bandwidth (16GB/s) with PCIe 4.0

High-bandwidth data transfer to the host PC up to 16GB/s with PCI-e 4.0

● Edge Computing via CUDA/OpenCL

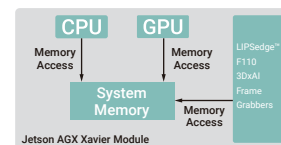
Enable edge computing and full-programming capability using CUDA/OpenCL with dedicated System-on-Module (SOM) design

● Scale-Up Architecture for Robotics Vision with x86

Expand and use from x86 Legacy Applications with multiple LIPSedge™ F110 3DxAI Frame Grabbers in a single host system without CPU bottleneck

● Low Latency Data Exchange with GPUDirect RDMA

Low latency data exchange in memory without CPU involvement by providing a direct path between host GPU and LIPSedge™ F110 3DxAI Frame Grabber



■ PoE+ 2 ports with PSE

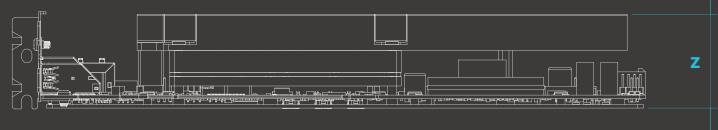
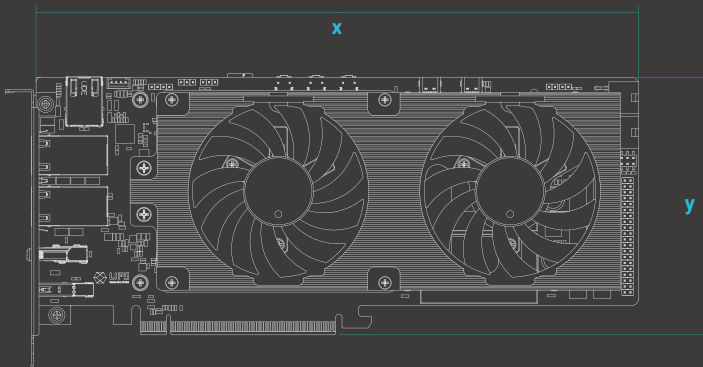
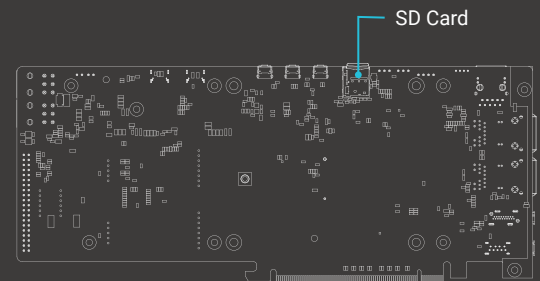
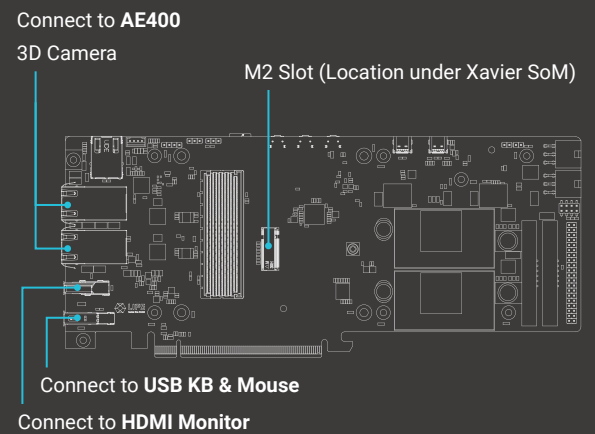
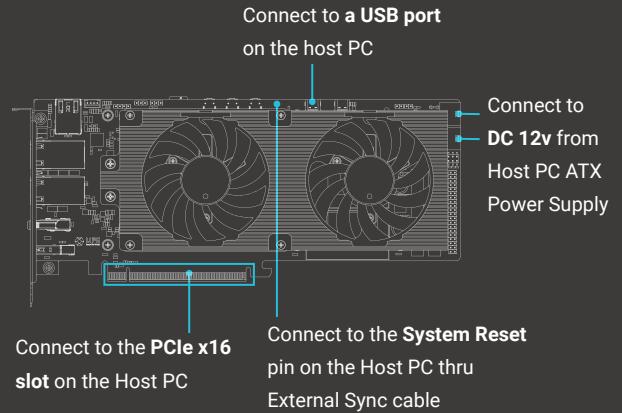
Supports IEEE 802.3af/at for Power Sourcing Equipment (PSE), delivering up to 30 watts

■ Compatible with LIPSedge™ 3D Camera

Compatible with full-line of LIPSedge™ 3D Camera family covering ToF, Stereo, and Structured-light technologies that support OpenNI, OpenCV, ROS/ROS2, Halcon, NVIDIA Isaac, and more



Module Support	
Module	NVIDIA Xavier AGX 32GB
Internal I/O Physical	
HDMI	1x HDMI type A
LAN	1x 1000Base-T RJ-45 2x 2.5Gbase-T RJ-45 support POE 802.3af/at
USB	1 x USB 3.2 Gen1 type-C
	1x USB type-C OTG only
	1x USB 3.0 type A port
Pin header	40-pin pin header (5x GPIO, 1x I2C, 1x Debug UART)
Expansion slot	1x M.2 M-key 2242 PCIe only
Power connector	2 x 6-pin backward connector
Fan connector	1x 4-pin fan connector
Optional function	
Boot sequence control	Build-in MCU to control boot sequence
TPM	TPM 2.0
Storage	
Storage	Micro SD(up to 2 TB)
Power Input	
Power Input	12V DC input
Board Dimension	
Dimension (mm)	260 x 111 x 40
OS	
Supported OS	Linux Ubuntu 18.04 LTS / 20.04 LTS
Environmental	
Humidity	10 ~ 90% @ 40°C, (non-condensing)
Temperature	Operating Temperature : -20 °C ~ +50°C
	Storage Temperature: -45°C ~ 80°C



Dimension	MIN	NOM	MAX	TOLERANCE	UNIT
X	259.5	260	260.5	±0.5	mm
Y	110.5	111	111.5	±0.5	mm
Z	39.5	40	40.5	±0.5	mm

